

REMARKS

Applicants respectfully request reconsideration of this application as amended. Applicants submit the following response to overcome the Examiner's rejection. Claims 1-46 are still pending.

In the Office Action, claims 1-46 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of U.S. Patent Application No. 08/998,583. Applicant submits that the amendments to the claims overcome the obviousness-type double patenting rejection and the rejection should accordingly be withdrawn.

In the Office Action, the Examiner rejected claims 1-9, 13-21, 25-28, 31-37, and 40-44 under 35 U.S.C. § 102(e) as being anticipated by Lawande et al. (U.S. 6,219,697). In the Office Action, the Examiner rejected claims 10-12, 22-24, 29-30, 38-39, and 45-46 under 35 U.S.C. § 103(a) as being unpatentable over Lawande et al. (U.S. 6,219,697). Applicant respectfully traverses the rejections.

Independent claims 1, 13, 27, 33, and 40 recite that the map is distributed across a plurality of bus devices. Support for this limitation may be found in the specification at page 8, lines 28-30. In Lawande, "the network manager has a memory device and a processor with the memory device having a look-up table." (see Column 4, Lines 11-13 and Column 14, Lines 50-53 of Lawande) Applicant submits that Lawande teaches that the map, in the form of a look-up table, is stored solely in the network manager.

Applicant submits that Lawande fails to disclose or suggest the embodiments of the invention as claimed in independent claims 1, 13, 27, 33, and 40. Specifically, Lawande fails to disclose or suggest the map to be distributed across a plurality of bus devices. Claims 2-

12, 14-26, 28-32, 34-39, and 41-46 depend from claims 1, 13, 27, 33, and 40, respectively, and therefore contain the same limitations not disclosed or suggested by Lawande.

Accordingly, Applicant respectfully requests the withdrawal of all rejections under 35 U.S.C. § 102(e) and 35 U.S.C. § 103(a).

Conclusion

For the foregoing reasons, Applicant submits that claims 1-46 are now in condition for allowance, and indication of allowance by the Examiner is respectfully requested. If the Examiner has any questions concerning this application, he or she is requested to telephone the undersigned at the telephone number shown below as soon as possible. No fee is believed due in connection with this amendment. In this is incorrect, please charge any insufficiency or credit any overpayment to Deposit Account No. 02-2666.

Respectfully submitted,

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APPENDIX A

Marked Up Version of Amended Claims

1. (Amended) A bus system, comprising:

a first dynamically configurable bus;

a first bus device on the first bus [at] having a first virtual address and [at] a first physical address [on the bus];

a second bus device on the first bus [at] having a second virtual address and a second physical address; and

a map of the first and second virtual addresses to the first and second physical addresses, respectively, [encoded on a program storage medium,] the map [being] to be accessible over the first bus and to be distributed across a plurality of bus devices on the first bus.
3. (Twice Amended) The bus system of claim [1] 12, wherein a portion of the map [resides on at least one of the first and second bus devices,] is stored on the bridge.
5. (Twice Amended) The bus system of claim 4, wherein the bus manager [comprises] is one of a workstation [or] and a personal computer.
6. (Amended) The bus system of claim 4, wherein a portion of the map is stored on the bus manager.

8. (Twice Amended) The bus system of claim 1, wherein at least one of the first and second bus devices is one of a printer, a plotter, a workstation, a personal computer, a video camera, [or] and a magnetic tape drive.

9. (Twice Amended) The bus system of claim 1, wherein the map is encoded as one of an array, a doubly linked list, a tree, a table, [or] and a file.

11. (Amended) The bus system of claim 1, [wherein the bus includes:
a first dynamically configurable bus; and] further comprising
a second dynamically configurable bus.

13. (Twice Amended) A bus system, comprising:
a first dynamically configurable bus; [and]
a plurality of bus devices coupled to the first bus, each of the plurality of bus devices having a virtual address and a physical address [, at least one of the plurality of bus devices mapping at least one virtual address to the respective physical address for the bus device associated with the respective physical address]; and
a map of the virtual addresses of the bus devices to the physical addresses of the bus devices, said map to be accessible over the first bus and to be distributed across the plurality of bus devices.

15. (Twice Amended) The bus system of claim [13] 23, wherein [a] the map [resides on at least one of the bus devices] is to be reconstructed for bus devices on the first and second buses after detection of a configuration event on one of the first and second buses.

17. (Twice Amended) The bus system of claim 16, wherein the bus manager [comprises] is one of a workstation [or] and a personal computer.

18. (Twice Amended) The bus system of claim 16, wherein a portion of the map is stored on the bus manager.

20. (Twice Amended) The bus system of claim 13, wherein at least one of the bus devices is one of a printer, a plotter, a workstation, a personal computer, a video camera, [or] and a magnetic tape drive.

21. (Twice Amended) The bus system of claim 13, wherein [a] the map is encoded as one of an array, a doubly linked list, a tree, a table, [or] and a file.

22. (Twice Amended) The bus system of claim 13, wherein [a] the map is bi-directional.

23. (Amended) The bus system of claim 13, [wherein the bus includes:
a first dynamically configurable bus; and] further comprising
a second dynamically configurable bus.

25. (Twice Amended) [A program storage device encoded with instructions that, when executed by a computer, map a plurality of virtual addresses to respective physical addresses for a plurality of bus devices in a dynamically configurable bus system upon detecting a configuration event] The bus system of claim 24, wherein a portion of the map is stored on the bridge.

26. (Twice Amended) The [program storage device] bus system of claim [25] 23, wherein [each virtual address and its respective physical address is mapped into at least one of an array, a doubly linked list, a tree, a table, and a file] the map is to be reconstructed for bus devices on one of the first and second buses after experiencing a configuration event.

27. (Twice Amended) [The program storage device of claim 25, wherein the mapping of a plurality of virtual addresses to respective physical addresses includes] A method comprising:

querying [each of the plurality of] a first bus [devices] device and a second bus device other than a bus manager on a dynamically configurable bus system;

identifying [each] the queried device from its configuration information [therefore];

ascertaining [the] a virtual address and [the] a physical address for [each] the identified device;

constructing a map of the virtual address [for each of the plurality of] of the first and the second bus [devices] device to the physical address [therefore] of the first and the second bus device, respectively; and

storing the map, said map to be accessible over the bus system and to be distributed across a plurality of bus devices on the bus system.

28. (Amended) The [program storage device] method of claim 27, wherein the constructing the map [comprises at least one of] includes encoding the map as one of an array, a doubly linked list, a tree, a table, and a file.
29. (Twice Amended) The [program storage device of] method of claim [25] 27, wherein the dynamically configurable bus system [comprises] includes a first dynamically configurable bus and a second dynamically configurable bus and the [mapping a plurality of virtual addresses to respective physical addresses] querying is performed [only] for bus devices on one of the first and second dynamically configurable buses experiencing a configuration event.
30. (Twice Amended) The [program storage device of] method of claim [25] 27, wherein the [encoded instructions, when executed, map the virtual addresses to respective physical addresses bi-directionally] constructing the map includes constructing a bi-directional map.
31. (Twice Amended) The [program storage device] method of claim [25] 27, wherein the constructing the map includes at least one mapped virtual address that is a guaranteed unique identifier.
32. (Amended) The [program storage device] method of claim [25] 27, wherein [at least one of the plurality of bus devices is a] the storing the map includes storing a portion of the map on the bus manager.

33. (Twice Amended) A method comprising:

querying [each of] a plurality of bus devices other than a bus manager on a dynamically configurable bus system;

identifying [each] the queried device from its configuration information [therefor];

ascertaining a virtual address and a physical address for [each] the identified device;

[mapping] constructing a map of the virtual address for each of the plurality of bus devices to the physical address [therefore] for each of the plurality of bus devices; and

storing [a] the map, said map to be accessible over the bus system and to be distributed across the plurality of bus devices on the bus system.

34. (Twice Amended) The method of claim 33, wherein the querying [each of] the plurality of bus devices includes querying at least one of a printer, a plotter, a workstation, a personal computer, a video camera, and a magnetic tape drive.

35. (Twice Amended) The method of claim 33, wherein the bus manager comprises one of a workstation [or] and a personal computer.

36. (Twice Amended) The method of claim 33, wherein the storing the map includes storing a portion of the map on the bus manager.

37. (Twice Amended) The method of claim 33, wherein the [mapping the virtual address for each of the plurality of bus devices to the physical address therefor includes mapping each

virtual address and its respective physical address into at least one of] constructing the map includes encoding the map as one of an array, a doubly linked list, a tree, a table, and a file.

38. (Twice Amended) The method of claim 33, wherein the [mapping the virtual address for each of the plurality of bus devices to the physical address therefor includes bi-directionally mapping the virtual address for each of the plurality of bus devices to the physical address therefore] constructing the map includes constructing a bi-directional map.

39. (Twice Amended) The method of claim 33, wherein the dynamically configurable bus system includes a first dynamically configurable bus and a second dynamically configurable bus and the querying is performed [only] for bus devices on one of a first [or] and second dynamically configurable bus experiencing a configuration event.

40. (Twice Amended) A [program storage device encoded with] machine-readable medium that provides instructions [that], which when executed by a [computer] machine, [perform a method] cause said machine to perform operations comprising:

querying [each of] a plurality of bus devices other than a bus manager on a dynamically configurable bus system;

identifying [each] the queried device from its configuration information [therefor];

ascertaining a virtual address and a physical address for [each] the identified device;

[mapping] constructing a map of the virtual address for each of the plurality of bus devices to the physical address [therefor] for each of the plurality of bus devices; and

storing a map, said map to be accessible over the bus system and to be distributed across the plurality of bus devices on the bus system.

41. (Twice Amended) The [program storage device] machine-readable medium of claim 40, wherein the querying [each of] the plurality of bus devices includes querying at least one of a printer, a plotter, a workstation, a personal computer, a video camera, and a magnetic tape drive.

42. (Twice Amended) The [program storage device] machine-readable medium of claim 40, wherein the bus manager [comprises] is one of a workstation [or] and a personal computer.

43. (Twice Amended) The [program storage device] machine-readable medium of claim 40, wherein the storing the map includes storing a portion of the map on the bus manager.

44. (Twice Amended) The [program storage device] machine-readable medium of claim 40, wherein the [mapping the virtual address for each of the plurality of bus devices to the physical address therefor includes mapping each virtual address and its respective physical address into at least one of] constructing the map includes encoding the map as one of an array, a doubly linked list, a tree, a table, and a file.

45. (Twice Amended) The [program storage device] machine-readable medium of claim 40, wherein the [mapping the virtual address for each of the plurality of bus devices to the

physical address therefor includes bi-directionally mapping the virtual address for each of the plurality of bus devices to the physical address therefor] constructing the map includes constructing a bi-directional map.

46. (Twice Amended) The [program storage device] machine-readable medium of claim 40, wherein the dynamically configurable bus system includes a first dynamically configurable bus and a second dynamically configurable bus and the querying is performed [only] for bus devices on one of a first [or] and second dynamically configurable bus experiencing a configuration event.